

*When you mistreat my brothers and sisters
you mistreat me, too.*



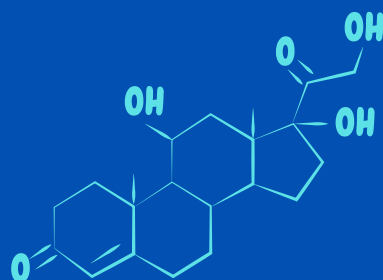
Adrenal Insufficiency Management for the Modern Age

THE CORTISOL PUMP METHOD

originally developed by Professor Peter Hindmarsh, www.cahisus.co.uk

The standard practice of treating adrenal insufficiency with oral hydrocortisone 3 or 4 times a day is a poor replacement for the natural rhythms of cortisol in the body. Patients with Addison's can be both under and over treated, even if their blood labs show the levels to be within normal range, which is why having a full 24 hour profile to look at the cortisol levels in 1 or 2 hour increments is so valuable. Side effects, such as headaches, weight problems, tiredness, and lethargy are common among patients whose cortisol peaks too high, followed by periods where the levels drop too low in the same day.

The natural circadian rhythm can be mimicked by using pump therapy. This treatment protocol also bypasses the stomach, instead releasing cortisol straight into the blood stream like in a healthy body. In patients with gastrointestinal symptoms or comorbidities, this can alleviate the stress that oral cortisone places on the stomach.



In order to minimize symptoms and maximize quality of life, the primary aim in Addison's management is to try and replace cortisol as closely as possible to the way the body would normally produce it. Hydrocortisone is a synthetic form of cortisol and it is the mildest steroid that can be used to replace cortisol. It is important to get the dose as accurate as possible. Long term damage and side effects can be caused by both over and under replacement of cortisol.



In Addison's, it is important to replace the early morning levels of cortisol to stop the risk of hypoglycemia. The pump method achieves this with minimal disruption to the patient's sleep habits (as is the case with oral circadian rhythm dosing). The body naturally uses cortisol in the early hours of the morning to stabilize blood glucose levels during the period where no food or drink is consumed.

While the pump method can achieve near biological cortisol rates on the minimum dose of hydrocortisone, it is important that the rates are worked out for each individual. The cortisol pump must be programmed for the patient's unique needs, there are no generic rates for cortisol replacement.

Addison's Disease doesn't have to claim your quality of life.

It is important to note that the pump delivery using hydrocortisone to replace cortisol will only be as good as the rates are set to deliver. The first choice is to collect a 24 hour day curve from blood sampling.

Saliva sampling is not suitable for this purpose as the saliva cortisol is not indicative of the amount of cortisol being used by the organs, rather it is like a by-product and may be influenced by other factors.

When a 24 hour day curve is not available, patients may have to resort to the less ideal symptom diary method, making adjustments to their dosing schedule based on symptoms.



Continuous subcutaneous infusion pumps are often marketed to patients with diabetes, however they have been used successfully to treat Addison's disease as well.

It is recommended to mix Solu-Cortef in the potency of 100mg to 1 ml of sterile water so that 1 unit = 1 mg of hydrocortisone. For this reason, it is recommended that patients are prescribed powder only vials, so that the mixing ratio is correct.



Lack of FDA approval is not a reason to hesitate trying pump therapy for your Addison's patient.

Most insurance companies will want an appeal and a peer to peer prior authorization request, however after explaining patient need and the existing research supporting pump therapy, many have approved pumps, supplies, and medications for Addison's patients.



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